

ASSOCIATION FOR MAXIMUM SERVICE TELEVISION, INC.



May 23, 2007

**Via Electronic Filing**

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12 Street, SW  
Washington, DC 20554

P.O. Box 9897  
4100 Wisconsin Avenue, NW  
Washington, DC 20016

Tel (202) 966-1956  
Fax (202) 966-9617

Re: Notice of Ex Parte Communication,  
ET Docket Nos. 04-186, 02-380

Dear Ms. Dortch:

On May 21, 2007, Mr. David Donovan and Mr. Bruce Franca of the Association for Maximum Service Television (MSTV), Mr. Robert Hubbard of Hubbard Broadcasting, Mr. Paul McTear of Raycom Media, Mr. William Peterson of the E. W. Scripps Co., Mr. Preston Padden of the Walt Disney Company and Jonathan Blake of Covington and Burling met with Chairman Kevin Martin, Ms. Michelle Carey in the Chairman's office, and Ms. Monica Desai of the Media Bureau with regard to the above-captioned proceeding.

The above parties discussed MSTV's technical filings in the above-captioned proceeding. The parties explained that the FCC's recent DTV measurements confirm that personal/portable devices will cause extensive interference to DTV reception. The parties also explained that TV stations provide important hurricane and severe weather warnings that could be adversely affected by interference from such personal portable devices. In addition, the parties stated how interference from such devices could affect wireless microphones and sports and newsgathering activities associated with the use of wireless microphones.

The following attachments were distributed at the meeting.

Respectfully submitted,

A large, stylized handwritten signature in black ink, appearing to read "David", is written over the typed name and title.

David Donovan  
President

CC: Chairman Martin  
Ms. Michelle Carey  
Ms. Monica Desai

## DECLARATION

I am Jeffrey Willis, Coordinating Technical Manager, Remote Operations, ESPN Productions, Inc. I have 35 years' experience in the electronic communications industry, including the last 25 years with ESPN. At ESPN, I have nine years as an engineer-in-charge of a mobile television production unit, covering sports events of all types. I have spent the last 13 years as a remote technical manager, responsible for the technical planning and execution of remote telecasts, including the integration of wireless audio and video content associated with golf and auto racing events, which require extensive use of remote pickup technology because of the large venues involved. I have also done planning and implementation of wireless content for ESPN's Sunday and Monday Night NFL for the past nine years. I have won two Emmys, one for NASCAR and one for Sunday Night NFL production.

While the term "white space" originally designated geographical areas of the country that are not served by an over-the-air television station, wireless equipment manufacturers are using it to refer to any TV channel in the spectrum that is not assigned to a broadcast station in a market. For example, under the manufacturers' proposal, if in Concord, New Hampshire, a market where major NASCAR races are run every year, there were no station transmitting on channel 22, Wi-Fi access providers could use that bandwidth. That, however, would be a channel needed by ESPN to conduct wireless production operations for NASCAR races in Loudon, New Hampshire. Specifically, ESPN would need to use at a race the following wireless equipment and needed frequencies:

- 16 RF video transmitters/receivers and 16 RF audio transmitters/receivers, for the in-car content 32 Frequencies
- 14 RF transmitters/receivers & frequencies for the five pit reporter mics;
- 14 RF transmitters/receivers & frequencies for the pit reporter IFB communication;

- e Eight RF transmitters/receivers & frequencies for two-way communication with the five manned RF Handheld cameras in the pits; and
- Six 2Ghz/2.5Ghz transmitters/receivers & frequencies for the pit handheld cameras.

The Concord frequency coordinator would not only need to allocate available channels for ESPN's production within that market but also factor in the needs of both local-market broadcasters and those licensed in the Manchester, Boston and Portland markets to accommodate their newsgathering operations in all three markets (which would include not only their normal-course reporting but also coverage of a major sporting event, the NASCAR race that brought ESPN to town). Wi-Fi, Wi-Max or any other kind of signals transmitting in these same bands would interfere with the remote pickups of both ESPN and the local stations.

ESPN's Monday Night Football also makes heavy use of wireless equipment. For every Monday night game, we request 153 wireless audio frequencies (mics, IFBs, and P/Ls) and three 2/2.5Ghz channels to cover the game and remote studio programs. Given the existing heavy use in major markets, it has been a challenge to fully accommodate these requests. In 2006, we were able to coordinate at least 90 percent but less than 100 percent of our requests in Minneapolis, Philadelphia, Oakland, Phoenix, Baltimore, Buffalo, and Charlotte, but in Denver, Miami and Indianapolis, we were not able to do so and compromised the production plans or suffered on-air RF failures due to the insufficiency of frequencies available. In the 2007 season, we will also have the same problem of insufficient frequencies in the heavily saturated markets of San Diego and San Francisco.

The foregoing only takes into account ESPN's usage for a MNF telecast. Other users of remote pick-up frequencies at an NFL game are the NFL itself (to conduct the game), the stadium, and radio and TV broadcasters from the participating teams' markets. Satisfying all these needs is already a difficult challenge, requiring very intricate coordination, and often the demands are too great for them to all be satisfied. In other words, particularly in major markets, even though there is

not a TV station broadcasting on an allotted TV channel, the bandwidth is still being extensively used by the broadcast industry.

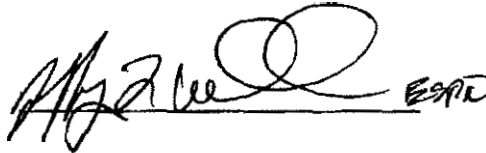
Proponents of allowing other uses of this bandwidth claim that their equipment would have sensing capabilities that would allow it to detect another RF presence and not transmit in order to avoiding creating interference. To the best of my knowledge, however, this technology, has not yet been proven to work in a real time broadcast event application. Further, even if it were to work as predicted, it would likely have two serious flaws. First, professional-quality remote pickup equipment is very sensitive and likely to be able to receive transmissions that consumer-grade equipment could not detect. In other words, a remote pickup could be interfered with when it was receiving a signal that a nearby consumer device, e.g., a PDA, failed to detect and began transmitting on that frequency. Also, since consumer devices would need to shut down when a priority user began transmitting, the consumer device would interfere with the broadcast equipment during the time it needed to stop transmitting. Unfortunately, with digital transmissions, such interference can be readily apparent in the productions.

A further problem would be policing. Though broadcast production use would have priority, the consumer use would not be individually licensed. Such users therefore would be could be anywhere, on the sports venue grounds, in houses and businesses of the surrounding community, or anywhere in the local area, not even traceable by license records. ESPN's and other telecasters' remote productions would be greatly affected. Interference could pop up without warning, with no way to stop it. Given the saturation of the available frequencies, particularly in the major markets, quite likely there would be no back-up frequencies available as an alternative to avoid such interference.

ESPN's corporate and public mission is, "To serve sports fans wherever sports are watched, listened to, discussed, debated read about or played." Wireless technology is integral to ESPN's efforts to bring these fans the highest quality sounds and pictures. ESPN's recognized record in

innovating audio and video enhancements in sports coverage is the direct result of being able to use wireless technology to bring sound and pictures from places cables can never go. Imagine tuning into an auto race and watching an in-car camera without the sound, not hearing the crash of helmets or pads along the line of scrimmage in a football game, or not seeing dramatic replays provided by cameras in hockey nets.

I hereby declare, under penalty of perjury, that, to the best of my knowledge, information and belief, all of the factual information contained in this Declaration is accurate and complete.

A handwritten signature in black ink, appearing to read "Jeff Willis", followed by the letters "ESPN" in a smaller, blocky font.

Jeffrey Willis  
Coordinating Technical Manager  
Remote Operations  
ESPN Productions, Inc.

May 18, 2007

JOHN TIGGELOVEN, being duly sworn deposes and says:

I am Vice President of Physical Production for Disney Theatrical Productions, a division of The Walt Disney Company and I submit this affidavit in connection with the so-called "white spaces" debate in Washington.

I have been employed by Disney Theatrical Productions for 10 years and have 34 years of experience in the stage play industry.

Disney Theatrical Productions produces plays both on Broadway and in theatres throughout the country. Among our theatrical stage productions are "The Lion King", "Beauty and the Beast", "Aida", "Tarzan", "Mary Poppins", "High School Musical" and soon "The Little Mermaid".

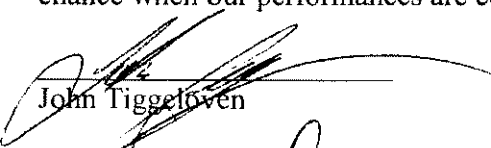
I am responsible for the development, construction and operation of all technical aspects of our productions. I am also responsible for the safety of our cast and crew.

Our productions as well as those of our competitors have become exceedingly complex both on stage and backstage. The audience only sees a portion of what actually goes on to present a live performance. Aside from the obvious use of wireless equipment on stage, backstage is of equal import. The backstage areas in many theatres are tight fitting since the theatres were not built for today's complex shows. Given these difficulties, to quote a line from a song in "Mary Poppins" – "precision and order" is required backstage and the necessity to use dependable wireless transmissions to communicate is essential.

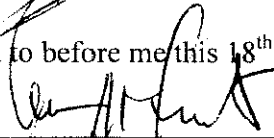
Dozens of frequencies are in constant use in the theatre to bring the voices of the performers to life, to deploy special effects; to facilitate scene changes and most importantly to protect our cast and crew from possible injury. The signals from these wireless devices are also what make it possible to operate infra red and other listening devices for our hearing impaired patrons.

If there was free for all with new electronic gadgets and devices exploiting these frequencies it would seriously impede our ability to perform and would therefore threaten the economic viability of our industry both on Broadway and on tour.

Unlike other parts of the entertainment business we are live and we do not get a second chance when our performances are compromised and the theatre experience denied.

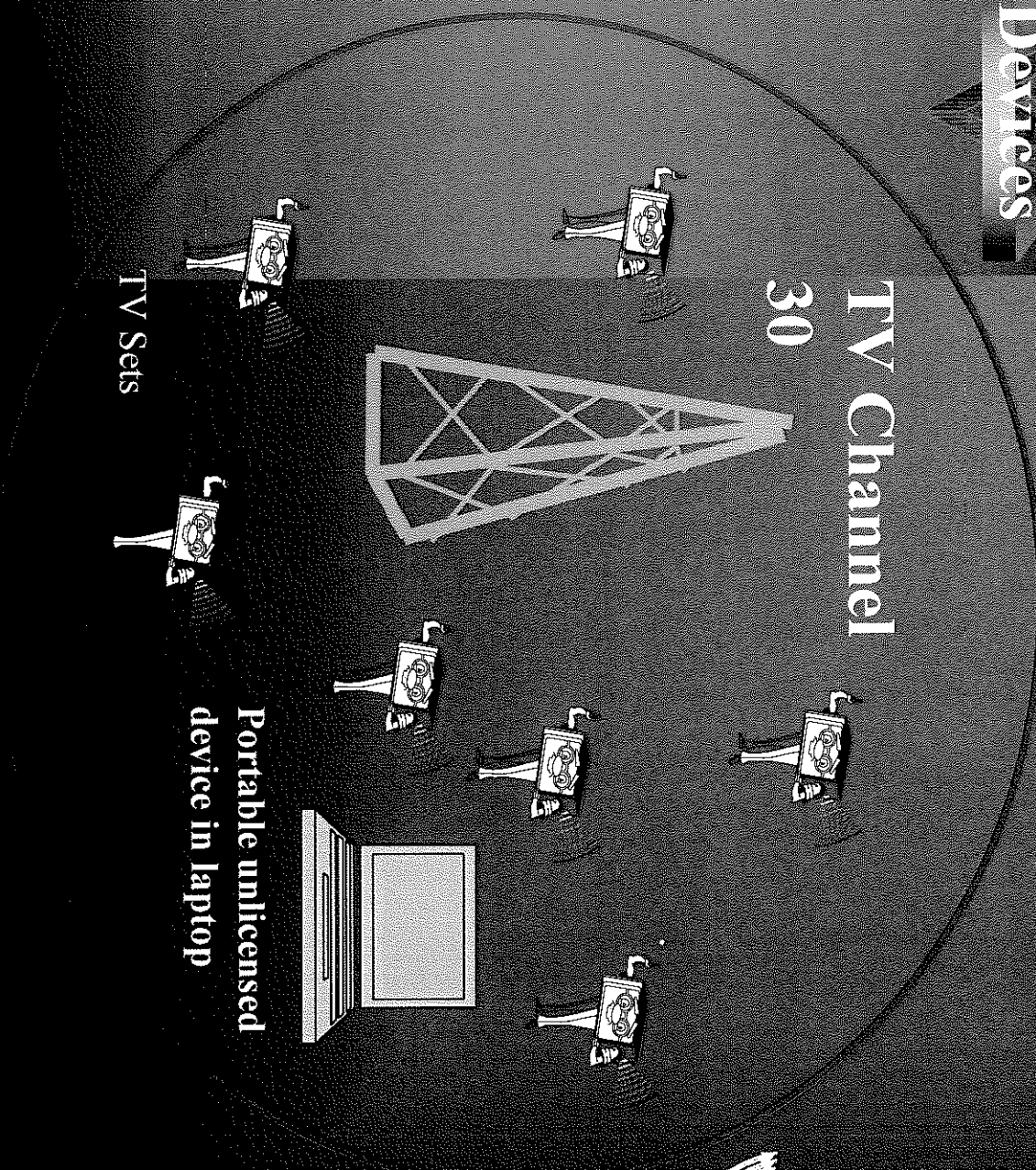
  
John Tiggeloven

Sworn to before me this 18<sup>th</sup> day of May, 2007

  
Notary Public

**ALLAN M. PROFF**  
Notary Public, State of New York  
No. 81-4870178  
Qualified in New York County  
Commission Expires March 24, 2011

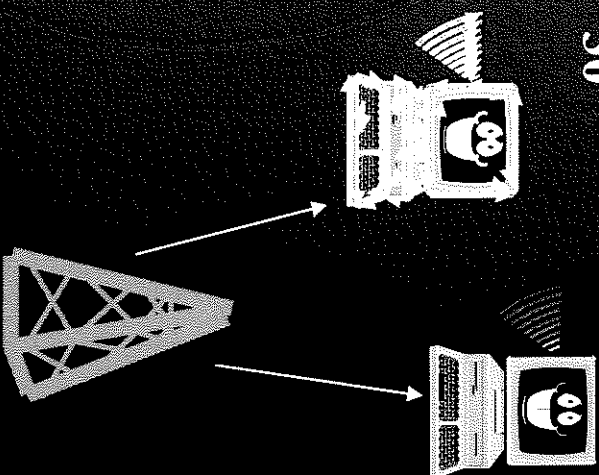
# Fixed vs. Personal Portable Devices



TV Sets

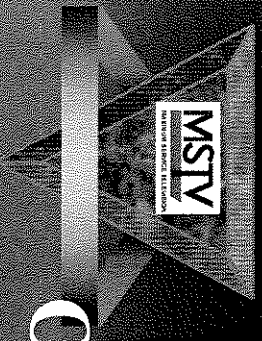
Portable unlicensed  
device in laptop

Fixed unlicensed  
system operating  
on co-channel TV-  
30



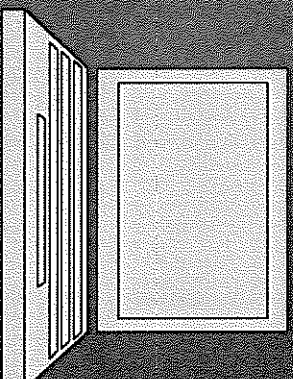
Unlicensed base  
station located outside  
station contour via  
geolocation



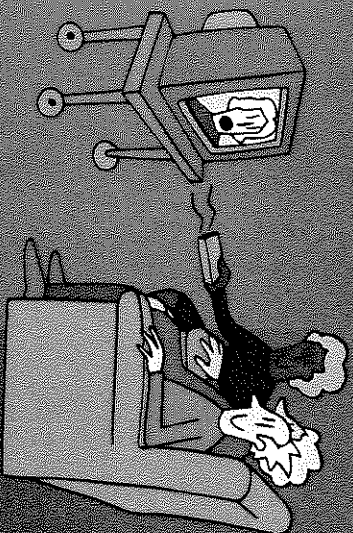


## Out of Band

75 feet

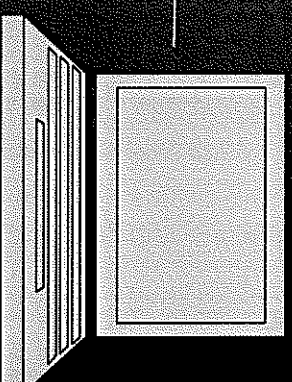


**Interference  
Distances from  
an Unlicensed  
Device (100 mW)**



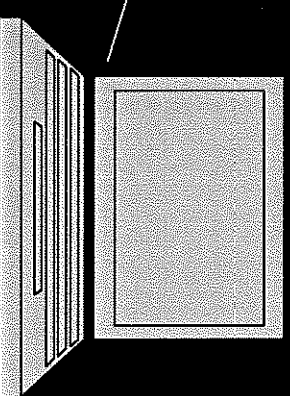
## Adjacent Channel

Up to several hundred  
meters depending on  
quality of TV set

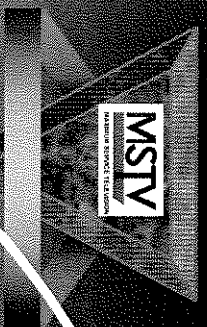


## Co-channel

Up to 75 sq. kilometers







# OET Report:

interference on

first

adjacent

channel

(median

TV set)

-84dBm

Adjacent Channel Interference

@ 10 meters from TV set

-67.3 dBm

20 miles



50 miles

Adjacent Channel

Interference @ 80

meters from TV set!

